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U.S. DEPARTMENT OF ENERGY

PUBLIC MEETING

ON

U.S. DEPARTMENT OF ENERGY'S PROPOSED
DRAFT SURFACE WATER INTERIM MEASURES/
INTERIM REMEDIAL ACTION PLAN AND
DECISION DOCUMENT FOR THE 903 PAD,
MOUND AND EAST TRENCHES AREAS
(OPERABLE UNIT NO. 2)

Tuesday, October 23, 1990

WESTMINSTER CITY PARK RECREATION CENTER
10455 SHERIDAN BOULEVARD
WESTMINSTER, COLORADO

WENDY GREEN - MODERATOR

SCOTT GRACE - DOE
BILL FRASER - EPA
TOM GREENGARD - EG&G
GARY ANDERSON - EG&G

GARY BAUGHMAN - Colorado Department of Health
MIKE ANDERSON - Roy F. Weston, Inc.
STEVE KLINE - S.M. Stoller Corp.

ADMIN RECORD

A-0002-000068

SPEAKERS

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CERTIFICATE

TITLE: UNITED STATES DEPARTMENT OF ENERGY
PUBLIC MEETING ON PROPOSED DRAFT SURFACE WATER
INTERIM MEASURES/INTERIM REMEDIAL ACTION PLAN
AND DECISION DOCUMENT FOR THE 903 PAD, MOUND
AND EAST TRENCHES AREAS (OPERABLE UNIT NO. 2.)

DATE: OCTOBER 23, 1990

LOCATION: WESTMINSTER, COLORADO

I hereby certify that the proceedings herein are
contained fully and accurately on the tapes and notes
reported by me at the hearing in the above case before the
United States Department of Energy, and that this is a true
and correct transcript of the same.



Official Reporter

Federal Reporting Service, Inc.
17454 East Asbury Place
Aurora, Colorado 80013

1 the air, the water, the soil, and countless other living
2 beings that inhabit this area. I think that that's
3 important to take into consideration.

4 So, my brief comment to the DOE, EPA, CDH, and
5 EG&G is that we need more respect for the substance and that
6 inherent in this respect of radionuclides and plutonium is a
7 respect for all life.

8 Thank you

9 MS. GREEN: Paula Elofson-Gardine, please?

10 MS. ELOFSON-GARDINE: I would also like to ask that we
11 not be heckled from the employee peanut gallery over here
12 while we give our testimony. I think it's inappropriate to
13 have the speakers as we go hassled as they're speaking, such
14 as the last one.

15 I would like to mention that in terms of
16 Kathleen's testimony, this is also a deep concern for many
17 of us that the spread of contaminants from everyday
18 operations are not regarded as immediate hazard, however the
19 latency periods are a concern for the citizens because of
20 difficulty of proving cause and effect.

21 I am Paula Elofson-Gardine, Director of Concerned
22 Health Technicians for a Cleaner Colorado. I am on the
23 Board of Directors for the Rocky Flats Cleanup Commission.
24 Many of the comments that I have are both general and
25 detailed and I will be submitting written comment before the

1 end of the comment period, as well.

2 MS. GREEN: Paula, could I ask you to give your
3 address, please?

4 MS. ELOFSON-GARDINE: [REDACTED]
5 [REDACTED].

6 MS. GREEN: Thank you.

7 MS. ELOFSON-GARDINE: We have some concerns in regards
8 to encroachment of the radioactive seeps in regards to the
9 881 cleanup area and we are very concerned that the
10 employees working on that remediation have the appropriate
11 protection. The executive summary of this implies that the
12 water meets NPDES requirements and that they are not threat
13 to the public. However, the NPDES permit requirements do
14 not include radionuclides currently and the new NPDES permit
15 is not out yet So, the implication that the water is okay
16 because it meets NPDES permits is somewhat of a misnomer
17 because it does not include the radioactive constituents.

18 I also have a question that I would like to have
19 addressed in the Responsiveness Survey that have any field
20 and lab studies been done to confirm the isotopic identify
21 of the seeps, the dissolved fractions, particle sizes, and/
22 or solubility or nature of insolubles in the area of seeps?
23 And, the leachate from the high soil contamination has not
24 been addressed in this study.

25 Also, there is some concern that the radioactive

1 removal unit assumes an ionic radioactive species. There
2 are other studies that have been done. For example, I will
3 cite RFP Report 2901, Soil Decontamination at Rocky Flats;
4 RFP Report 3914, Dust Transport-Wind Blown and Mechanical
5 Resuspension; RFP Report 3130, Decontamination of Soil
6 Containing Plutonium and Americium; RFP Report 3226, Removal
7 of Plutonium Contaminated Soil from 903 Lip Area During 1976
8 and 1978.

9 It indicates that greater than 50% of the
10 contamination in this area is suspected to be in the less
11 than .01 micron size range in an insoluble variety and that
12 there is some deep concern that the current plan for removal
13 of the radionuclides from seeps does not take this particle
14 sized fraction into consideration. There's tremendous
15 concern that there be appropriate studies that will include
16 that greater than 50% fraction of contamination to be
17 addressed.

18 There is a concern over the lack of hydrogeology
19 information and plume dispersion that would hamper
20 appropriate interception attempts. For example, the
21 sandstone lenses have been notated in the past reports to be
22 of questionable integrity and some technicians have
23 questioned the migration between the alluvium because of
24 this. Plutonium transport by wind is notated as significant
25 and a primary source of contamination spread, but the

1 resuspension hazard has not been addressed for safety
2 measures for workers and with respect to remediation
3 activities since you will have earth moving involved out
4 there at the site regardless of how you will attempt to put
5 your treatment units in.

6 The study indicates that you're unable to quantify
7 colloidal material between .1 and .45 microns. This is
8 considered as significant failure considering the earlier
9 studies that were already cited. It's important to identify
10 the solubles versus the insolubles. If they're soluble,
11 they may be amenable to precipitation and flocculation
12 techniques. But, if they are insoluble and less than .01
13 microns in size, how do you intend to deal with those
14 particles?

15 There is some discrepancy in the air contamination
16 section 2.3 6. The ambient air concentrations are stated as
17 approximately within 20×10^{-6} picocuries per liter A
18 liter is a water measurement, not an air concentration
19 measurement. That should be corrected to be picocuries per
20 cubic meter if that's what your intention is. Also, the
21 Gerhardt-Langer Report on resuspension indicated much
22 greater levels of plutonium and americium air contamination
23 due to resuspension, as well as the historical data from the
24 DOE Environmental Measurements Lab in New York indicated
25 greater than 5,000 picocuries. So, I would urge you to do

1 some correction of those figures.

2 The 882 Hillside, we're concerned about recharge
3 and seepage going down gradient to that area and how heavily
4 it will be impacted and that the French drain system also be
5 looked at in terms of interaction between these two OU's.
6 Also, in terms of the identity of the radionuclides you're
7 dealing with here, you have 17.70 picocuries per liter of
8 dissolved fraction notated versus 632 picocuries per liter
9 of gross alpha total listed here. Is this representative of
10 the insoluble and colloidal fractions versus soluble
11 dissolved species?

12 Also, in terms of the identify of the isotopes
13 involved, we would urge you to have a more complete
14 characterization for identification so the potentially
15 responsible parties, such as Coors from the Project Pluto
16 dumping out there, can be brought in as a co-responsive
17 party on this cleanup. And, there should be some under-
18 taking of correction of the sampling deficits so that all
19 the isotopes can be identified.

20 I have other comments and I'll try to be real
21 brief here. I'll include the other comments with my written
22 statements

23 Thank you

24 MS. GREEN: Thank you.

25 Gale Biggs?

1 DR. BIGGS: My name is Gale Biggs. [REDACTED]

2 [REDACTED] I'm

3 speaking for myself, but I am one of the directors of the
4 Rocky Flats Cleanup Commission. My interest in reviewing
5 this document was in the meteorology and air quality
6 portions and how that was addressed in terms of safety and
7 health. I reviewed the interim remedial action plan and
8 decision document for guidance on how the issue of any
9 plutonium-tainted dust from the proposed remediation actions
10 would be controlled. My concern in this regard is that in
11 discussions with people from Rocky Flats they have stated
12 that somewhere between 60 to 99% of the plutonium that
13 leaves the facility comes off as refloatation dust. What
14 this says to me is that if you shut down Rocky Flats,
15 clogged up every one of the vents, allowed nothing to come
16 out of any of the buildings, you still have cut off less
17 than half of the plutonium that's coming off from that
18 facility. So, dust is a real concern to me and this was one
19 of Mr. Greengard's presentations in terms of this being a
20 source of it.

21 When one looks at the sources of resuspension of
22 plutonium dust, the 903 Pad looms up as one of the major
23 sources of plutonium from the Rocky Flats facility. So,
24 therefore, anything that disturbs the soil in this area is
25 going to be releasing plutonium. From that point of view,

1 careful mitigation is a necessity. So, I reviewed the 903
2 document for answers as to how mitigation measures would
3 control these emissions. The 903 document did raise several
4 serious issues, but in my mind it completely missed others.
5 But, even more important, none of these issues that were
6 raised in the 903 document were discussed. They simply
7 referenced other documents.

8 So, I immediately turned to Chapter 9, the
9 reference section, to obtain details on these references and
10 they were not listed. Hence, my reason for getting up
11 earlier in the question and answer session and asking where
12 are these documents? Do they even exist? I guess, I'm
13 sorry, Tom, I was not comforted by your answers. In my
14 mind, disturbing the soil out there and mitigating this
15 refloatation of dust is an extremely serious issue and to
16 simply reference in the 903 document that these are taken
17 care of in other documents that don't even exist, that's
18 lacking. That can't be an acceptable answer.

19 So, I guess what my bottom line conclusion is is
20 that, one, no work should start at the 903 Pad until these
21 documents are not only available, but have been approved by
22 outside scientific review and, more specifically, by a
23 public comment period because they are important enough that
24 they need to go through the full process. So, I don't even
25 think this plan should be approved until those documents are

1 available and have gone through the process.

2 Let me give a specific example, just one, and that
3 is that a reference was made in the wind speed and wind
4 direction for construction and simply referenced the
5 guidance of the 881 Hillside site. First off, the
6 remediation action plan for the 881 Hillside doesn't even
7 recognize the existence of radionuclides as being a problem
8 at 881. And, yet, here we are now in the 903 Pad where it
9 is even recognized as a major problem and we're simply using
10 the same guidance that we were at 881. Again, I've not seen
11 this guidance in writing. I've heard about it.

12 Specifically, the wind speed goes about 15 miles an hour,
13 then construction activity stops. I commented on that one
14 as not being adequate. Dust starts blowing at about 10
15 miles an hour average wind speed, not at 15. So, here we
16 are at an even more sensitive site where we know plutonium
17 dust is a problem and we're using the same guidelines that
18 we were for 881 where radionuclides weren't even really
19 recognized as being a problem. So, this seems very
20 inadequate to me and I think it needs to be detailed very
21 carefully before any more action goes on.

22 I guess I have four recommendations that I'd like
23 to toss out that you consider at this point. The first one,
24 that that plan be modified, that all construction activities
25 cease at a 10 mile an hour wind speed averaged over a 15

1 minute period. Two, that all construction activities cease
2 at peak wind gusts that exceed 20 miles an hour. Three,
3 that all surface disturbances be done in enclosed shelters.
4 Four, once construction has stopped because of a wind speed
5 alert, that it does not restart for at least an hour after
6 the last 10 mile per hour reading is observed. If I
7 understand the guidance from 881, within 15 minutes after
8 the wind drops below 10, you can go back to work
9 irrespective of whether it's come back up again in the next
10 15 minutes.

11 So, I think these are some guidances that need to
12 be followed and I think that we need to see those documents
13 that are referenced to mitigate this wind blown activity.

14 Thank you.

15 MS. GREEN: Thank you

16 I apologize if I say the next name improperly.
17 Penelope Pegis?

18 MS. PENELOPE PEGIS: Good evening. My name is Penelope
19 Pegis. [REDACTED] [REDACTED]. That's Lakewood,
20 Colorado. It's 80226. I'm here tonight representing the
21 Front Range Alternative Action Group, although I am also on
22 the board of directors of the Rocky Flats Cleanup
23 Commission. I'm not representing them in my comments.

24 I would first all to your attention the work
25 involved in the public presentation regarding the proposed

1 cleanup of Hillside 881. You offered a work study session
2 on relevant issues, and by subsequent information exchange,
3 increased knowledge and understanding of specific areas of
4 concerns were broadened. This session was of value. It was
5 very limited, but it was of value. And, I would strongly
6 urge similar sessions be organized in the future. I feel
7 that if better communication between Department of Energy,
8 the various involved agencies, and citizens' groups were
9 facilitated, it would greatly improve the credibility
10 standing of the Department of Energy and plant management.

11 On my review of the 903 document, several issues
12 are inadequately addressed or neglected altogether. I think
13 the most glaring thing I'm seeing is that 881 and 903 are
14 being treated as separate entities. The probability of
15 cross contamination between sites is basically self-evident.
16 Management of both operations need to work in very close
17 conjunction and communication with one another with regard
18 to shared exposure risks, events, and workers' safety. The
19 903 document downplays workers' safety issues. The
20 assessment and plan are minimal and addressed barely
21 superficially.

22 The reality is that there will be a great deal of
23 contaminant bearing dust resuspended during construction of
24 the treatment plant. Work at 881 is already resuspending
25 dust and will continue to do so. The air monitors in place

1 at 881 do not even monitor the air in real time. This is
2 absurd.

3 You have been urged many times to tent these areas
4 prior to disturbing soil and I fail to understand your
5 continued resistance to such a logical and reasonable
6 suggestion. Workers' safety should be a top priority in
7 these cleanup activities. Yet, the DOE and plant management
8 continue in an almost pathological state of denial with
9 regard to the extent and the lethality of the materials
10 being handled.

11 I find it very unacceptable that you may alter the
12 ARAR's to suit your needs. This merely continues the
13 practice of internal review and management. It's been a
14 long and painful history of making your own rules without
15 ethical or honest consideration of the population that your
16 actions effect.

17 Regarding the proposed treatment plant design,
18 I'll touch on just -- I've got several areas of concern.
19 When the neutralization tank effluent enters the carbon
20 columns through the volatile organic chemical removal,
21 there's nothing in place to test the water for any radiation
22 or remaining VOC's before it is discharged into South Walnut
23 Creek. The apparent and dangerous assumption is that the
24 system will work. I would strongly urge placement of
25 holding tanks before and after final processing in the

P R O C E E D I N G S

7:00 p.m.

MR. WENDY GREEN: I will now formally commence this public meeting concerning the U.S. Department of Energy's proposed surface water interim measures/interim remedial action plan and decision document on the 903 Pad and Mound Areas and the East Trenches Areas at the Rocky Flats Plant in Jefferson County, Colorado.

This proceeding is officially designated as the Westminster, Colorado, public meeting of the U.S. Department of Energy's draft final document entitled Proposed Surface Water Interim Measures/Interim Remedial Action Plan and Decision Document, Operable Unit No. 2, 903 Pad, Mound and East Trenches Areas. This meeting is being held on the 23rd day of October, 1990, at the Westminster City Park Recreation Center at 10455 Sheridan Boulevard in Westminster, Colorado, and it's commencing at 7:05 p.m.

My name is Wendy Green and I am the Meeting Officer for this public meeting, which is being held to receive public comment on the proposed interim remedial action plan for the surface water at the Rocky Flats Plant's 903 Pad, Mound and East Trenches Areas. I am a technical facilitator from the University of Colorado at Denver's Center for Public-Private Sector Cooperation. In addition to technical facilitation at meetings like this, my work

1 with the Center includes training of public managers and
2 research in public policy.

3 I have been asked by the U.S. Department of Energy
4 to conduct this public meeting as an independent, unbiased
5 party, in order to insure that all interested organizations
6 and individuals have the opportunity to comment on the
7 decision document. I am not an advocate for or against any
8 party nor do I have any position in this matter. Rather, I
9 am a neutral third party who will supervise this meeting.

10 The draft Environmental Restoration Federal
11 Facility Agreement and Consent Order is an Interagency
12 Agreement among the U.S. Department of Energy, the U.S.
13 Environmental Protection Agency, and the Colorado Department
14 of Health. It requires the U S. Department of Energy to
15 provide the opportunity for oral and written comment prior
16 to the adoption of any plan for interim remedial action.

17 The proposed surface water interim measures/
18 interim remedial action plan and decision document was
19 prepared by the U.S Department of Energy and its operating
20 contractor, EG&G Rocky Flats, Inc. The document, which is
21 required under the draft Interagency Agreement, is written
22 to meet the guidelines of the Comprehensive Environmental
23 Response Compensation and Liability Act, the Resource
24 Conservation and Recovery Act, and the National Environ-
25 mental Policy Act

1 The document was released for public review on
2 September 26, 1990. A public notice announcing the
3 availability of the document, the 60-day public comment
4 period, and this public comment meeting was published in
5 several newspapers throughout the Denver area. I have
6 marked the text and publication date of the newspaper notice
7 as Exhibit No. 1 of this proceeding and would like to
8 introduce it at this time for the record.

9 (Whereupon, Exhibit No. 1 was received into the
10 record.)

11 In addition, I have marked the proposed surface
12 water interim measures/interim remedial action plan and
13 decision document, dated September 26, 1990, as Exhibit No.
14 2 for the record of this proceeding.

15 (Whereupon, Exhibit No. 2 was received into the
16 record.)

17 You, as members of the public, have two options
18 for making comments on the proposed interim measures/interim
19 remedial action plan. You may make oral comments this
20 evening during the comment portion of the meeting or you can
21 submit written comments to the U.S. Department of Energy by
22 November 24, 1990. I'll tell you a little bit more about
23 how to submit written comment in a moment.

24 All participants in these proceedings will be
25 listed in the meeting record. Sitting to my left is the

1 court reporter who is transcribing verbatim the proceedings
2 this evening. If you have prepared written comments that
3 you would like to submit to supplement your oral testimony
4 or if you have a transcript of your oral testimony, please
5 bring it forward with you when you comment. Please, hand it
6 to the court reporter and he will mark it as an exhibit in
7 the proceeding. It will be entered into the record in
8 addition to the transcript of your oral remarks.

9 Secondly, as I previously mentioned, written
10 comments received by November 24, 1990, will be considered
11 in the preparation of the final interim measures/interim
12 remedial action plan and decision document. Those written
13 comments will receive the same consideration as oral
14 comments presented here tonight

15 Written comments that are submitted by mail should
16 be addressed to Beth Brainard, Public Affairs Officer, U.S.
17 Department of Energy, Rocky Flats Office, P.O. Box 928,
18 Golden, Colorado, 80402-0928. If you missed that address,
19 it is available at the information table in the back. No
20 particular form is necessary for submitting your written
21 comments. Anything that is legibly written can be provided
22 either to the court reporter or the Department of Energy at
23 the address that I just mentioned.

24 In response to oral and written comment, the U.S.
25 Department of Energy will prepare a Responsiveness Summary

1 which will be made part of the administrative record. After
2 preparing that Responsiveness Summary, the U.S. Department
3 of Energy with the concurrence and approval of the U.S.
4 Environmental Protection Agency and the Colorado department
5 of Health may modify or supplement the interim measures/
6 interim remedial action plan prior to issuing a final
7 decision document. The U.S. Department of Energy will issue
8 a public notice when that final decision document becomes
9 available

10 After I finish making my comments, Tom Greengard,
11 who is the Manager of Remedial Programs at EG&G Rocky Flats,
12 is going to make a brief presentation on the proposed
13 interim remedial action plan. That will be followed by a 30
14 minute question and answer period which we have included in
15 order to clarify issues related to the presentation and to
16 help you in preparing your written comments and oral
17 comments, excuse me. Questions will be answered by Mr.
18 Greengard and other members of the panel who I will
19 introduce in just a moment, actually after his presentation.
20 Please, sign up with Cathy Carlson--Cathy, can you raise
21 your hand--in the back if you want to ask questions after
22 Mr. Greengard's presentation. We will take a short break
23 after the question and answer period before we commence the
24 comment portion of this evening's meeting.

25 Before I get started, does anybody have any

1 questions about the process that we're going to be using
2 this evening? Yes?

3 MS. PAULA ELOFSON-GARDINE: Will all questions and
4 comments -- discussion be -- transcript?

5 MS. GREEN: All questions and comments will be part of
6 the record of this evening's meeting. If you would like to
7 make a comment that is thereafter responded to in the
8 Responsiveness Summary, they have to be made during the
9 comment period. They won't be responded to in the question
10 and answer -- if they're only made in the question and
11 answer period.

12 MS. ELOFSON-GARDINE: In other words, they will edit
13 out --

14 MS. GREEN: No, it won't be edited out, but it will not
15 be responded to in the responsiveness piece.

16 MS. ELOFSON-GARDINE: The whole discussion here will
17 not appear in the transcript?

18 MS. GREEN: It will be in the transcript. It will not
19 be responded to in the Responsiveness Summary. Okay? So,
20 if you have a comment, that's when it needs to be made.

21 Any other questions on this evening's proceedings?

22 (No response)

23 MS. GREEN: Okay. Then, I would like to introduce Mr.
24 Tom Greengard who is the Manager for Remedial Programs at
25 EG&G Rocky Flats.

1 MR. TOM GREENGARD. Okay. Thank you for coming
2 tonight. The last time we had an IAG meeting in this room,
3 it was in the middle of a snowstorm. We still had a pretty
4 good turnout and people were very interested. And, tonight,
5 at least the weather is better. So, on our way home, we
6 won't have to worry about the flakes.

7 We are going to talk tonight about the interim
8 remedial action plan which was out to the public in mid-
9 September and we're having this public comment period in the
10 middle of that and the period of public comment will close
11 at the end of November. And, I'd like to say a few words
12 about the operable units and we'll go on in the presentation
13 to talk about the plan, of course, and the schedule And, I
14 have some aerial photos which may help you to visualize what
15 the surface water seeps and the surface water problems look
16 like.

17 Okay. We have divided the plant into 16 operable
18 units based on mostly physical proximities, sometimes based
19 on the RCRA vs. CERCLA issue; some are RCRA units, some are
20 CERCLA units. And, the Operable Unit 2 which we're going to
21 talk about tonight is east of the main plant areas and it is
22 contaminated in that area with radionuclides and organic
23 compounds in the groundwater and in the surface water. I'm
24 sure by the time we get through a few slides, we'll have
25 this worked out.

1 Okay. This is a picture of the plant and the
2 actual area of interest here, these are all the plant
3 buildings and the area of interest, Operable Unit 2, is in
4 this part of the plant site over there. There is Indiana
5 Street, the east plant boundary. We refer to this area as
6 the Operable Unit 2, but also the 903 Pad Area which is this
7 area here and is composed of a number of individual
8 hazardous waste units, the Mound Area which also has about
9 four units in it, and the East Trenches Area which has a
10 number of trenches which received materials back in the 60's
11 and 70's.

12 I don't know if the aerial photos will show up
13 very well with all the light. If there's somebody back
14 there by the light switches, we might try to turn them off
15 for a moment. Maybe, not. Yeah, that looks better to me.

16 This is the 903 Pad Area and in the 1960's and the
17 50's there were drums stored on this area. It was not
18 asphalted at the time and these drums contained radioactive
19 materials that are waste products from the plutonium
20 processing and also solvents that were used in the
21 processing work. And, these drums did leak into the soil
22 and that caused the spread of contamination when the wind
23 would pick up the soil particles. It was cleaned up. The
24 drums were removed and the asphalt pad, which is what this
25 is made of, was put on there in 1969.

1 So, there's the Pad Area and some of the seep
2 areas that we're going to talk about extend down this
3 hillside and the Mound Area is right across the road from
4 it. And, these trenches are right out this way. This is
5 the B Series ponds and the treatments works that are
6 proposed in the remedial action plan will be up there and
7 will be collecting from sources there and also from some
8 seeps on the hillside here.

9 The Interagency Agreement does provide for interim
10 remedial actions as a way to accelerate remediation of
11 contaminated sites at Rocky Flats Plant. The final actions
12 of which this is just a subset, this surface water interim
13 action is only for the surface water and it's only an
14 interim action, but the final action will involve soils,
15 groundwater, and the surface water. Investigations, we
16 actually started at this place in 1987 for this particular
17 area and we will be continuing them, you know, starting in
18 February and they'll go on for a couple more years and
19 feasibility studies will follow concurrently with them. And
20 then, we'll design and construct the final action in the
21 late 90's That's why we're going to this interim action.
22 It is an accelerated response. We'll have the first
23 elements in place, as you know from the plan, by the spring
24 of '91 and the final construction of the interim action will
25 be completed by the end of September, 1991.

1 A little history, in 1989, we were talking with
2 the agencies, CDH and EPA, about groundwater action and at
3 that time we did propose an action which involved drilling
4 some wells, pumping and treating, and discharging that
5 treated water. It was decided at the time that there was
6 not enough information on which to base a meaningful or a
7 well-designed interim remedial action for the groundwater.
8 So, we decided we would go back in the field and collect
9 more groundwater data, but at the same time, the first
10 investigations in 1987 had revealed some surface water
11 contamination and those data were put in the report, the
12 groundwater interim action report, as a summary of the data.
13 And, when we looked at them and the agencies, EPA and CDH,
14 looking at them, the decision was made that we ought to go
15 forward with the surface water interim action at that time.
16 In the meanwhile, we will be collecting additional
17 groundwater data.

18 So, based on the series of meetings held in the
19 winter and spring of 1990, we did propose a surface water
20 interim action and that's the plan that resulted that was
21 released in September of this year. And, we're going to
22 treat specific surface water discharges and surface water
23 seeps. I'll show you those. I have some photos. And, our
24 plan is to use existing ditches and culverts. We don't want
25 to have a very large scale construction project on some of

1 these soils. They are contaminated with plutonium and
2 americium. So, we will minimize soil disturbance as much as
3 we can. The interim action will collect the base flows, the
4 actual flows that are coming out of the seep. It is not a
5 project designed to collect and treat storm water runoff
6 from spring rains.

7 All these little dots here are the monitoring
8 stations we have and I just put this slide up to show you
9 that there are quite a few surface water monitoring stations
10 and, out of these, we've lifted all the data and selected
11 what we call the initial stations up here for collection and
12 treatment and also what we call the remote stations down
13 here. They're remote from the treatment facility which is
14 going to be located up there. They're not remote from the
15 plant site proper. The contamination problem up in this
16 area is mostly high volatile organic compounds and the
17 problem down in this area is primarily plutonium
18 contamination.

19 It's our belief based on the studies done to date
20 that the organic contamination is caused from the ground-
21 water. And, the plutonium contamination does result from
22 the suspension of the soil particles from the drums that
23 were stored on there that I showed you earlier in the
24 presentation. Phase II, the next investigation, will
25 confirm that remedial investigation and that is scheduled to

1 start field work in February, 1991.

2 Right now, one of the questions is what is
3 happening to the water right now? And, most of that surface
4 water does either evaporate or percolate back into the
5 ground. The rest of the water goes through the creek or the
6 plant pond retention system, both in Woman Creek and South
7 Walnut Creek, and is treated to the permit standards as to
8 National Pollution Discharge Elimination System standards
9 before it is released. It is treated and tested and then
10 released. There are site specific standards that are very
11 rigorous, more rigorous than elsewhere in the state at Rocky
12 Flats Plant and that water is being treated to those
13 standards now. Therefore, there is no immediate threat to
14 the public health or the environment because we are
15 collecting and treating the water. And, again, it's being
16 implemented. This whole interim action plan is part of a
17 longer term strategy for cleanup.

18 Now, what's in the plan itself? The plan actually
19 does document what we're going to do. We're going to
20 collect the water upstream of the existing ponds and at some
21 seeps and inside South Walnut Creek. We're going to remove
22 the solids and metals and radionuclides with a combination
23 of methods. One is going to be chemical precipitation for
24 these compounds, the metals and radionuclides, for those
25 elements, and also membrane filtration. We're going to be

1 treating the organic materials with granular activated
2 carbon and that's part of the first phase for the initial
3 sources. That's what we're going to implement in the near
4 future.

5 We are going to confirm that the processes work by
6 field scale treatability studies. Because we want to get
7 into the ground soon and implement this remedial action, we
8 did not want to take a long time to perform bench scale
9 studies first. So, we're going to use some tried and true
10 technology as a field treatability study while we're
11 collecting the water instead of letting it continue to seep
12 into the ground or to evaporate. And, this test equipment
13 that we're going to be using is going to be especially
14 fabricated, custom-built based on our specific water. So,
15 it's going to be built for this project.

16 The areas that we call the initial seeps, the
17 initial sources that have the organic contamination, are
18 these three stations up here on -- I'll show you some photos
19 in a second on that -- what we call the remote sources or
20 from these stations down here. So, these are down on the
21 hillside below the pad, here's where the pad is, and these
22 are up by the plant security fence proper, the building
23 security fence. Again, the boundary of the plant is down
24 there about a mile and a half away.

25 What we're going to do for the initial sources is

1 to put in some sump pumps and some piping and collect right
2 there from the stream and deliver the carbon filtration unit
3 right to the spot for the organics removal and then we're
4 going to begin the treatability testing. And then, in the
5 second stage or second phase, we will deliver and install
6 the radionuclide units and continue the tests.

7 For the remote sources -- and, I have three air
8 photos coming up to give you a better idea what it looks
9 like. In the remote sources, we will be collecting the
10 water and then either trucking or piping it. We're leaving
11 that option open at this point for further design and
12 evaluation. And then, we will send that up to the treatment
13 plant for the treatability tests.

14 Here's the 903 Pad. To locate you, here's where
15 the treatment system is going to be and I have some other
16 photos coming. We're going to collect from these sources
17 right up here, put it into the plant, the initial sources,
18 and then further out, the remote sources, we're going to
19 also collect and, as I said, either truck or pipe up to this
20 treatment plant before discharge.

21 This is the 903 Pad. This is where some of the
22 seeps are coming up. The initial sources of treatment plant
23 is going to be up there -- I have two more close-ups coming
24 -- and, it's going to collect from water in there. And,
25 here's some of the seeps on the hillside. There's one here

1 that had high rads and there's another one over here. I
2 know you can't see very well on this photo, but I felt at
3 least we'd try to give you some kind of visual on what the
4 actual land looked like and what the seeps looked like.

5 That was the longest view away. Here's a pad --
6 the view I just showed you was from out here. Here are some
7 of the remote seeps. Here's the 903 Pad, and way over here,
8 is where we're going to put the treatment building, and
9 we're going to be collecting seeps that come right through
10 the security zone and we're going to be collecting at this
11 point here, putting them through the treatment plant, and
12 then discharging back into the creek. And, I have one more
13 photo, a close-up, of that. Here's the area that the
14 treatment plant will be in up here and the seeps that we're
15 collecting are coming down through there and we'll collect
16 them and then we'll go and treat them

17 The capacity of the system when it's at full
18 treatment will be 60 gallons per minute and we'll be taking
19 about 40 gallons per minute from that initial source area
20 and 10 or so from the remote system. Most of the seeps are
21 dry most of the year. There is a constant flow out of one
22 of the initial seeps through the -- it's not really seep,
23 it's a culvert coming out of the security zone.

24 Now, we're expecting the results of these tests,
25 that they will demonstrate the ability of the treatment

1 units to achieve the performance standards. We call those
2 applicable or relevant and appropriate requirements. Those
3 are the regulations and regulatory standards that we need to
4 treat to. We can modify the treatment and change the
5 process depending on the results of the tests. And,
6 something I'd like to emphasize is it's not a bench scale,
7 it's not a pilot scale, it's a full-sized treatability test
8 so that we'll do the treatment at the same time that we're
9 actually accomplishing the work of remedial action. If the
10 regulatory agencies, EPA and CDH, are satisfied, then it
11 very well may become the full scale interim remedial action.
12 If we have problems with treatment or achieving the
13 performance standards we want to achieve, then we may do
14 something else. It really depends on what the data show and
15 what the results of the treatability tests show.

16 One overheard now to talk about the schedules.
17 This is all about the plan up here we released in October.
18 We're having the information meeting in -- excuse me,
19 released in September, having the public information meeting
20 in October, tonight, and the end of the public comment
21 period is November 24 Excuse me for the slide which seems
22 to be a little bit reversed. And, the final interim action
23 plan will be put out in January, the end of January, 1991.

24 In the meantime, we'll be constructing the initial
25 sources collection system in February and March and we need

1 to have it installed around the middle of March, first week
2 in March, and then we're going to initiate the treatability
3 tests. And, we'd like to catch that first runoff event when
4 it's slowing. Right now, the seeps are dry out there and
5 we'd like to catch the first flush of water. We'll be
6 conducting the tests through the end of the year. We're
7 going to be constructing the second phase, the next phase of
8 the treatment facilities, in the spring through fall of '91
9 and the remote source collection system will also be
10 constructed in that time frame. And, we will complete
11 construction as scheduled in the Interagency Agreement at
12 the end of September, 1991.

13 And then, the treatability tests will continue for
14 the full system for another year and then we'll be
15 submitting a draft treatability study report to EPA and CDH
16 in April of 1992. They will evaluate it and we will
17 finalize that report in June of 1992.

18 I just have one last slide here to summarize.
19 That we do feel this is a problem on which we are prior-
20 itized. It's a prioritized project for us. That's why
21 we're dealing with it now. We think it's important, but we
22 don't see that it poses any immediate health threat to the
23 public or to the environment And, that the interim action
24 is an interim action. It's not the final action for the 903
25 problem. There are groundwater contamination problems or

1 soil contamination problems. We have started studies on
2 those. We'll continue those and the full remedy will
3 incorporate groundwater, soils, and surface water treatment.

4 The treatability tests for the interim surface
5 water action, we'll evaluate that technology and see if we
6 can meet the standards. These standards are very difficult.
7 They're specific to Rocky Flats, as I mentioned, several
8 times lower than other standards in the state and we are
9 designing and constructing the treatability test equipment
10 specifically for this project. We can't just go out and buy
11 it off the shelf at K-Mart and put it in.

12 Okay. That's the end of the presentation and I'll
13 turn it back to Wendy.

14 MS. GREEN. Okay. There were a number of people that
15 came in late and I'd like to invite you to come up. There's
16 chairs up here in the front. So, if you'd like to be more
17 comfortable, please come on up. And, if you did not get a
18 chance to see the agenda, what we will be doing next is
19 taking about half an hour to have questions and answers for
20 you to be able to gather information in order to make sure
21 that your comments -- you have all the information you need
22 to make your comments. After that, we'll take a brief break
23 and then we'll have the comment period for the rest of the
24 evening. In order to both ask questions and to make
25 comments, you will need to sign up on the lists in the back.

1 So, if you plan on asking a question, please make sure you
2 get back there and sign up and we'll get to the list in just
3 a minute.

4 Before we get started, I'd like to introduce the
5 panel members and I'm going to be going away from me. The
6 first person is Scott Grace who is the Project Officer for
7 the U.S. Department of Energy. The next person -- I hope
8 I've got these in the right order -- is Mike Anderson,
9 Project Director for Roy F. Weston, Inc. The third person
10 is Gary Anderson who is the Program Manager for Remedial
11 Engineering at EG&G Rocky Flats. Then, Tom Greengard whom
12 we just heard from. Then, Gary Baughman who is the Unit
13 Leader for Hazardous Waste Facilities in the Hazardous
14 Materials & Waste Management Division, Colorado Department
15 of Health. Next to him is Bill Fraser who is the Project
16 Officer for the U.S. Environmental Protection Agency. And,
17 on the end is Steve Kline who is the Manager of Technical
18 Services for S.M. Stoller Corporation.

19 I'd like to reiterate a point that came up in the
20 question right before the presentation and that is that the
21 question and answer period will not be considered part of
22 the official comment portion of tonight's proceeding and,
23 therefore, it will not be included in the Responsiveness
24 Summary. So, if you make any comments during the question
25 and answer period, you will need to repeat them during the

1 comment period in order to have them responded to in the
2 Responsiveness Summary.

3 Okay. It looks like I've only got one person
4 signed up for question and answer period. I was going to
5 tell you, you can only have one or two questions each, but
6 if there's only one person, we'll let you take as much time
7 as you need. If we have more questions, then we'll take as
8 long as we need for this portion of the meeting and then
9 we'll take a quick break and come back and have the comment
10 period.

11 Abraham Black, please come forward to the
12 microphone?

13 MR. ABRAHAM BLACK I think it's customary we address
14 the Chair.

15 MS. GREEN: You may.

16 MR. BLACK: But, I believe at this time, it might be
17 better that we turn around and address the audience.

18 MS. GREEN: Whichever you're more comfortable with.

19 MR. BLACK: I've attended a few of these meetings.
20 I've asked some questions and -- but no one answers this
21 question. No one knows. They say they don't know. And, I
22 don't know of a great deal of time and effort that's gone
23 into it to resolve any questions. Now, I think we have a
24 gentleman with us tonight to represent an arm of the Federal
25 Government and he's connected with this Rocky Flats. This

1 man should be interested in some of the people, what we have
2 worked by and under. Now, I have heard of some small
3 individual mines mining coal and ore and other things that
4 didn't comply with certain safety standards and they were
5 closed down, although they had a satisfactory safety record
6 and no record of fatalities. When you can't comply with
7 certain regulations, you close down. But, I don't think
8 that some of the things that's went on at Rocky Flats should
9 be accepted.

10 Now, we've seen tonight, I've seen this before,
11 about treating water, but there's many things that's never
12 been addressed at any of these meetings that I have ever
13 came to. And, I think the people that had the proper
14 training and background and education should have had all
15 this all in order before they started processing all this
16 material 30 some years ago. They should have had that
17 knowledge or the foresight. And, when I was employed at
18 Rocky Flats, the scope of my employment was a mechanic, gas
19 and diesel, and welder and that's what I worked at. And,
20 that's what I did. I wasn't hired in any other scope to
21 know anything else. And, I think I did my work well and
22 satisfactory at that time, but somewhere along the line or
23 some level of management and supervision, I was exposed to
24 some material that I didn't know anything about. For me, it
25 could have been some kind of a lubrication with dust and

1 dirt mixed with it. And, that just wasn't good management
2 and supervision. And, where was the arm of the Federal
3 Government at that time that allowed this to go on?

4 MS. GREEN: So, your question is addressed to whom,
5 sir?

6 MR. BLACK: I don't know. I just don't know who would
7 want to -- it's been asked so many times and nobody answers
8 it. I would like to have an answer from some level. The
9 question would be when are they going to take some
10 corrective measure? When is something going to materialize?
11 When I was working at Rocky Flats, I was given an order to
12 do some work. I did that work and I did it satisfactory in
13 a satisfactory length of time. But, management and
14 supervision don't seem to be accomplishing their work, as
15 well as the craftsmen accomplish their work.

16 MS. GREEN: Mr. Black, I sympathize with your concerns.
17 the content that we're addressing this evening has to do
18 with the remedial plan and I'd like for you, if you could,
19 to address a question to one of the panel members to
20 addressing the matter that we're talking about this evening.

21 MR. BLACK: Well, I guess, the Federal man over there
22 that represents the Federal Government. He --

23 MS. GREEN: Well, we have the Department of Energy and
24 we have the Environmental --

25 MR. BLACK: The Department of Energy, that's good

1 enough for me. The Atomic Energy Commission -- whenever I
2 was out there, it was called Atomic Energy Commission.

3 MS. GREEN: Okay. Thank you. Do we have any
4 responses?

5 MR GREENGARD. Sir, we're sympathetic to your work
6 situation when you worked at the plant. None of us were at
7 the plant. The DOE wasn't in charge of the plant at that
8 time and the present operating contractor, EG&G, was not
9 operating the plant at that time either. I think you're
10 going to have to talk to representatives of Dow Chemical,
11 perhaps. I really have no answer for you. This was well
12 -- years ago. I'm sorry.

13 MS. GREEN: Okay. The next name on the list is Dr.
14 William Kemper.

15 DR. WILLIAM KEMPER: Two technical questions, very
16 brief. First, do you plan to make any laboratory tests of
17 these methods which, reading your report, I see have not
18 been completely proven, such as the flocculation to remove
19 radionuclides. That could easily be done in the laboratory
20 using water that you could collect today probably. Do you
21 plan to do that? I don't know to whom to address this
22 question

23 MR. GARY ANDERSON: We are indeed in the midst of bench
24 scale tests We have -- will be starting within a couple of
25 weeks bench scale tests for the organics removal, and

1 shortly after that, we'll be starting on testing the same
2 issues you're talking about, the precipitation of radio-
3 nuclides. We do have a contract in place to do bench scale
4 tests to support these efforts.

5 DR. KEMPER: Yes. I would sure like to see the results
6 of that As far as the organics, that's the charcoal method
7 and that is pretty much a proven method, I take it. But,
8 the radionuclides has still a little bit of uncertainty to
9 it, although it looks quite feasible and it's something,
10 though, that could be done so quickly, I should think, in
11 the laboratory, I should think you would do that quite
12 promptly.

13 My other question is -- I've forgotten it. Maybe
14 if you want to comment further on the radionuclides and
15 flocculation while I think for a moment.

16 MR. GARY ANDERSON: We have, you know, small scale
17 tests that will demonstrate the feasibility of these units
18 which again, as Tom Greengard pointed out, we'll be putting
19 in at full size and will be field modifiable to optimize
20 operating conditions.

21 DR KEMPER: The other question is I just this week
22 received in the mail from, I think it was a Federal
23 Government agency, some literature on using minnows to test
24 treated water. Are you aware of that and have you
25 considered using that?

1 MR. GARY ANDERSON: Yeah, biomonitoring is a standard
2 means of determining effluent quality. We do not have -- if
3 we can back up, the contaminants that are presently flowing
4 into the streams, the streams all flow into terminal ponds
5 which are National Pollutant Discharge Elimination System
6 permit points, compliance points. And, so those compliance
7 points at our plant boundaries are where we are held to
8 specific effluent quality numbers. The biomonitoring is not
9 considered at this time because again this is an interim
10 measure. This is something to make a significant
11 improvement in the present conditions. There is no
12 consensus that biomonitoring would do a better job of
13 monitoring parts per billion of contaminants in the water
14 quality. Biomonitoring only works to see can we keep
15 minnows alive? Can we keep cerio daphnia alive? Distilled
16 water will kill minnows and cerio daphnia, et cetera. You
17 know, biomonitoring requires something in the stream.
18 Biomonitoring is most directly applicable to waste water
19 treatment plant effluent where you get the contaminants down
20 to low levels of conventional organics. If you have a BOD
21 of two or three or something like that, biomonitoring is a
22 good indicator. Our BOD is going to be .0000, who knows,
23 whatever. Our influent won't have nutrients there to
24 sustain biomass and so effluent certainly won't. I don't
25 think that biomonitoring is an appropriate concept.

1 MR. GREENGARD: And, I thought you had asked if we
2 considered it as a test method. It's not a test method.
3 It's not a treatment method is what I mean. It's merely a
4 method to identify or evaluate the effectiveness of your
5 treatment.

6 DR. KEMPER: I don't propose it as the final test, but
7 I think that it would be probably good public relations if
8 you would take some of this water, maybe right now from
9 where you say there's no public hazard, flow it through a
10 tank, add whatever nutrients are necessary to sustain fish
11 life, but just show that that 99.9% of this water makes a
12 suitable environment for these minnows. If you haven't seen
13 this report, I'll be glad to send it to you. It promotes
14 use of minnows for such biomonitoring. Have you seen it by
15 any chance? Would you like the report?

16 MR. GREENGARD: I'd be glad to review it. I haven't
17 seen it. Have you seen it?

18 MR. GARY ANDERSON: Well, I've seen many reports on
19 biomonitoring, fat-head minnows, cerio daphnia. It's normal
20 technology as a means of -- as one means of documenting
21 effluent quality. I would be pleased if you could send this
22 particular one.

23 DR. KEMPER: Yeah, I'd be glad to send it. Again, I
24 don't propose it, of course, as a replacement for the
25 chemical test. The chemical test is a final test, the

1 chemical test and the radiological monitoring, but it would
2 be, I think, a nice public relations demonstration.

3 MS GREEN: Thank you

4 MR. GREENGARD: Wendy, wait a second. I just wanted to
5 clarify one thing. There are not flowing streams out there
6 and perhaps that's the impression we were left with. These
7 are creeks which are, for the most part, dry and these are
8 seeps. And, even where the water comes up from the ground,
9 it very quickly evaporates or seeps into the ground.

10 DR. KEMPER: Well, why not take water from some of the
11 ponds now and -- or it could be done, I think, as some water
12 you could use.

13 MR GREENGARD: This plan doesn't address the pond
14 water, per se. But, the people from -- we'll look at your
15 report and share it with the people who are operating the
16 ponds.

17 MS. GREEN: Joe Tempel?

18 MR. JOE TEMPEL: I'm Joe Tempel with the Rocky Flats
19 Cleanup Commission. On Page 3-2, there is a statement that
20 may not be practicable to attain all the ARAR's and that
21 only substantive and not administrative requirements apply.
22 What does that mean?

23 MR BILL FRASER: As I'm sure you're aware, Joe, under
24 the CERCLA process, there are slightly different require-
25 ments for interim actions as opposed to records of decision

1 that document a final decision The stipulation that it may
2 not be practicable makes reference to a provision in the
3 National Contingency Plan which allows that for interim
4 actions, ARAR's must be attained to the extent practicable.

5 And, what was the other statement you made reference to?

6 MR. TEMPEL: It just says only substantive and not
7 administrative requirements apply. What does that mean?

8 MR. FRASER. I'm not the author of the report, but I
9 believe what they're referring to in that case, speaking
10 from memory, was that under CERCLA when you are taking a
11 response action within a CERCLA site, normally the
12 administrative provisions of other laws, such as formally
13 applying for permits, are not enforced. You have to meet
14 the substantive requirements of those other laws, but you
15 don't necessarily have to go through all of the administra-
16 tive steps that you might otherwise have to take.

17 MR. TEMPEL. Okay. And, I'll comment on that later
18 since it's going to be nine years before -- or six years
19 before the final action it will be in place.

20 How are the design flows determined and what
21 percent of the flows are you really capturing in treating?

22 MR MIKE ANDERSON: The flows are the maximum flows
23 that we have observed that are not related to a storm event.
24 We do have two on record that are considerably higher than
25 that that are apparently associated with runoff. So, it's

1 really a very conservative design. It's not a low flow
2 condition, at all. It's maximum flows that we've observed.

3 MR. TEMPEL: That didn't really come when you read the
4 report because there are average flows and then design
5 flows. So, you're saying you're designing for peak flows?

6 MR. MIKE ANDERSON. Unrelated to a storm event. It's
7 not the intent of the interim action to capture all flow.

8 MR. TEMPEL: Okay.

9 MR. MIKE ANDERSON: In other words, we had to choose a
10 certain design flow. We feel this is very high where there
11 would be infrequent releases or flows that we could not
12 capture. Even if we went to a higher flow, there would
13 always be some event that you simply cannot capture.

14 MR. TEMPEL: But, do you have a feel for what
15 percentage you are capturing even when you consider storm
16 events?

17 MR. MIKE ANDERSON: I'd say 75 to 80%.

18 MR. SCOTT GRACE: But, these are flows that we don't
19 encounter every day. For example, right now, some of our
20 seeps are not flowing. So, on an average basis, what we
21 might expect to see on an average basis is maybe 30% of our
22 design flow. So, most of the time, we'll be looking at
23 flows much less than those design flows. Does that help
24 clarify?

25 MR. TEMPEL Yeah. I don't know if you could design a

1 sewage treatment plant that way, but -- because you'd
2 probably have to deal with more maximum flows than what
3 you're dealing with.

4 Another question is you mentioned that the initial
5 unit that will be installed will be to remove the organics.
6 Why couldn't you install the filtration system to remove the
7 radionuclides since, at least for some of us, that's of most
8 concern to us?

9 MR. GARY ANDERSON. The GAC Systems to remove organics
10 is a well-proven technology. One can look at capacities of
11 activated carbon systems and with a fair degree of
12 confidence do it from the book We are, by the way, doing
13 bench scale work to support that. There is less certainty,
14 there's less experience in radionuclides removal and that
15 it's more appropriate there to do bench scale studies.

16 I think an important point, if I may, is that the
17 status quo right now, these seeps are contributing to the
18 surface water system. They are now flowing to the terminal
19 ponds where they're treated and discharged. So, this system
20 that we're putting into place now is a means of reducing
21 load on the surface water system and reducing load on the
22 terminal ponds and an upgrade of where we are now.

23 MR. TEMPEL: I understand that. Okay.

24 MR. GRACE: Some more clarification on that. We're
25 restricted from doing field activities until we have an

1 approved plan in place and a record of decision. And,
2 starting with the carbon units is something that we can do
3 very quickly and immediately. It's going to take a little
4 bit more time to get it set up to do the field treatability
5 testing of the radionuclides. So, that's essentially why
6 we're starting with the carbon first because once we get an
7 approved program, then we can jump right into and start
8 testing with the carbon

9 MR. TEMPEL: How much time do you think it will take
10 place between the carbon system and the filtration system?

11 MR. GARY ANDERSON: One of the sheets that Tom showed,
12 Sheet 16 of the handout, we are looking -- our expectation
13 is to be constructing that in April to June period of '91
14 and a startup in the summer of '91

15 MR. TEMPEL: With both units?

16 MR. GARY ANDERSON: Yeah. The first one, the carbon
17 unit, would be started up in March.

18 MR. TEMPEL: Okay.

19 MR. GARY ANDERSON: And then, the carbon unit would run
20 by itself for a few months. Mid-summer, we'd have the rads
21 removal system in place and those two would be running on
22 just the surface water sources out of South Walnut Creek for
23 the summer. In the fall, September, we would have the
24 collections system to bring contaminants -- the surface
25 water seeps over from the area south and east of the 903

1 Pad. So, in the fall of '91, those flows -- we're looking
2 at maybe only 10 gallons a minute or so coming from those
3 south sources, but those would be brought in. So, the
4 system would be run with organics removal/with rads removal
5 just on the South Walnut Creek sources for a few months and
6 then would bring in the other sources.

7 MR. TEMPEL: When you finally get them running
8 together, is there any testing that's going to occur between
9 the filtration system that should remove the radionuclides
10 and the GAC unit to remove the VOC's so that you don't
11 contaminate the carbon system?

12 MR. GARY ANDERSON: That's the intent and that's the
13 sequence. We want to do rads removal first and then we'll
14 do GAC for the organics removal just for that exact purpose,
15 so that we'd have relatively -- that the GAC would not be
16 contaminated with rads.

17 MR. TEMPEL: But --

18 MR. GARY ANDERSON: Pardon me, the other part of your
19 question is will we have a way to test in between. We will
20 have test ports between the several GAC units and will have
21 test sampling positions before going into the GAC. Each and
22 every -- would have a test before and after the rads removal
23 and tests between the GAC units. So, we'd have four or five
24 different sample ports through the whole series because it
25 is starting off as an R&D. We want to have that R&D kind of

1 flexibility to change something and measure the consequences
2 and learn from it.

3 MR. TEMPEL: Does that mean you'd have a holding tank
4 so if you take a sample and it proves it's hot that it
5 wouldn't go -- recycle it back through?

6 MR. GARY ANDERSON The only holding tank we have is on
7 the influent end as a flow equalization basin. We will not
8 have an effluent holding tank on the discharge side. Our
9 plan is to monitor as expressed in the book here. It's to
10 monitor several times a week to document compliance.

11 MR. TEMPEL: And, my last question is rather than
12 dumping that effluent which is treated back into Walnut
13 Creek, why can't you recycle that back into the plant
14 operations and use it rather than treat it twice downstream
15 in the ponds?

16 MR. GARY ANDERSON: I guess my response would be that
17 it's not much water -- we're not talking about a whole lot
18 of water in the course of a year and it would be a fair
19 amount of piping to bring it back to the plant. Just
20 looking at it from the plant's point of view, the dollars it
21 costs to gain that small amount of water, you know, it's not
22 an attractive economic concept.

23 MR. TEMPEL: Okay. Thanks.

24 MR. GARY ANDERSON: Okay.

25 MS. GREEN: Gale Biggs?

1 DR. GALE BIGGS: On Pages 7-2 and 7-3 of the document,
2 there are references made to other documents that it talks
3 about. In the second paragraph, it makes reference to the
4 Environmental Restoration Health & Safety Plan, the ERHSPP.
5 Does that document exist? Is the document considered
6 complete? And, is it publicly available?

7 MR. GREENGARD: The document exists as a draft. It's
8 been reviewed by EPA and CDH and we're in the process of
9 responding to comments, evaluating comments, and finalizing
10 the document. I think it will be final in a month or two.
11 I don't remember the exact schedule. It's not yet out to
12 --

13 DR. BIGGS: I'm sorry, I meant that to the public?

14 MR. GREENGARD: It's not out to the public at present.

15 DR. BIGGS: Yeah, you're saying in about a month or
16 two, it will be?

17 MR. GREENGARD It will be final. I don't know if it's
18 going to be a public document or not, frankly.

19 DR. BIGGS: Okay. It states in the middle of that
20 paragraph that this ERHSPP outlines the requirements for a
21 site-specific health and safety plan Is that safety plan
22 going to remain in outline form or is it ever going to be
23 completed as a specific document, itself?

24 MR. GREENGARD: What the program plan does is it takes
25 the requirements of the plant and the requirements of OSHA

1 and the requirements of CERCLA and RCRA, everybody who has a
2 hand in the health and protection of the workers, and it
3 puts them into one program plan that will serve as the basis
4 for project specific plans. When we say site-specific, it
5 was really a project specific plan. For instance, for the
6 903 Surface Water Interim Action, there will be a project
7 specific health and safety plan for the construction work
8 and it will be based on the program plan.

9 DR. BIGGS: I guess, the same three questions. Does it
10 exist? When will it be considered complete? And, when will
11 the public be able to see it?

12 MR. GREENGARD: It doesn't yet exist. It will exist
13 when we have the design finalized because it really will
14 detail procedures for the construction operations and I
15 don't have here the schedule. It will be out to EPA and
16 CDH, I believe, in January since we're going to start
17 construction in February. I don't have that exact schedule
18 here.

19 DR. BIGGS: Okay. I have two more that I want to
20 question. Towards the bottom next to the last paragraph, it
21 says that the ER Department has developed wind speed and
22 dust control shutdown limits as guidelines for the 881
23 Hillside interim remedial action. Again, same three
24 questions. Does the document exist? Is it considered
25 complete? And, when can the public see it?

1 MR. GREENGARD: There were guidelines specified for 881
2 Hillside Project. Those guidelines do exist. I don't know
3 that they are out in the public. You probably know yourself
4 better than I do whether you've seen them or not.

5 DR. BIGGS: I've not seen them I've only heard about
6 them.

7 MR. GREENGARD: I really don't know where they are
8 right now. They're in the 881 Hillside document. They will
9 be used for the 903. They're referenced in the program plan
10 and they're also -- we have a draft plan for the prevention
11 of contaminant dispersion. That will be a public document
12 and publicly reviewed and that's a document that we'll have
13 a public meeting on and public comment on and give a full
14 briefing on and that will be the basis for the future
15 contaminant dispersion prevention at the plant. So, I think
16 that's a document, Dr. Biggs, that --

17 DR. BIGGS: You anticipated one of my questions. Now,
18 my last one is, the next page, the bottom of the second
19 paragraph, it speaks of the operational safety analysis.
20 Again, is that document -- does it exist, is it considered
21 complete, and can the public see it?

22 MR. GREENGARD: Operational safety analysis are
23 documents that the plant puts out for each construction
24 project. So, it will exist prior to the construction of the
25 903 just as it existed prior to the construction of the 881

1 Hillside remedial action

2 DR. BIGGS: Thank you

3 MS. GREEN: Has anyone else signed up to ask questions?

4 (No response)

5 MS. GREEN: Okay. Then, I'd like to go ahead and take
6 our break Before we do that, I'd like to remind you that
7 if you want to make comments on the proposed interim
8 measures/interim remedial action plan, you'll need to sign
9 up with Cathy Carlson at the table in the back. After the
10 break, I'll be calling forward those people that have signed
11 up to make comments. And, commenters will be called on in
12 the order that they've signed up and they'll be asked to
13 deliver their comments from this table up here in the front.
14 So, let's take a 10 minute break.

15 (Whereupon, a brief recess was taken.)

16 MS. GREEN: I'd like to begin the formal comment
17 portion of tonight's meeting. Before we get started, I
18 wanted to do a couple of things. First of all, I would like
19 to accept as Exhibit 3 a copy of the overheads used in the
20 presentation earlier.

21 (Whereupon, Exhibit No. 3 was received into the
22 record)

23 Second, I wanted to clarify the panel's role for this second
24 part of the meeting. They are here to ask questions of
25 those of you making public comments for clarification

1 purposes. They're not here to have a dialogue with you.

2 Okay?

3 I'd like to ask those of you that are making
4 comments to keep them brief and concise. We've got quite a
5 number of people signed up. I'm going to try to keep an eye
6 on the clock and limit you to about five minutes each out of
7 respect for the other people on the list and I apologize for
8 the fact that we have to do that.

9 I'd like to remind you to restrict your comments
10 to issues related to the proposed interim measures/interim
11 remedial action plan and, as the person presiding over this
12 meeting, I will reserve the right to ask commenters to keep
13 their comments relevant if I decide that I have to do that.

14 I want to stress that this is a formal meeting and
15 it's a recorded proceeding. That is that everything that is
16 said at this meeting is being recorded and a full transcript
17 is being prepared. The U S. Department of Energy's
18 preparation of the final decision document will be based on
19 the record developed at this meeting, as well as on the
20 written comments that are submitted by November 24. Because
21 of that, it's imperative that we develop a complete record
22 of your concerns and that when you speak you do so audibly,
23 into the microphone, one at a time. The microphone is
24 located at this table over here When I call your name to
25 come forward to make your comments, we'd like to ask you to

1 start by saying your full name and your mailing address. A
2 transcript of this meeting will be available for public
3 review at the information repositories that were listed on
4 the notice for this meeting. If you need to know more about
5 those repositories, the information is available at the back
6 table.

7 Okay. The first person that will be making
8 comments tonight is Kathleen Sullivan. Oh, I'm sorry.
9 Okay If you have written comments to make, when you come
10 forward you need to give them to the court reporter. He
11 will record them as the next exhibit in the proceedings for
12 the meeting.

13 Okay. Kathleen?

14 MS. KATHLEEN SULLIVAN. Okay. My name is Kathleen
15 Sullivan. I work with the Rocky Mountain Peace Center in
16 Boulder. [REDACTED] [REDACTED] [REDACTED],
17 [REDACTED] [REDACTED]

18 Before I go ahead with my brief comments, I would
19 just like to say that all of us being concerned about waste
20 that I'm very surprised to find this packet which, in
21 itself, represents a lot of waste. If nothing else, you
22 could have cut down your usage of paper by printing the
23 material on the front and the back. So, in this case, you
24 could have cut your use of paper by 50%. Also, if the
25 wording on these pages were consolidated in a better way,

1 then you could have probably cut down paper usage by another
2 quarter. So, I think being concerned about waste as we are
3 that these issues are very important to look at and I hope
4 that that's addressed.

5 I find myself a bit frustrated and angry about
6 constantly being posed with this idea of nothing posing
7 "immediate problems" And, I think that this kind of
8 attitude is involved in what actually created the disastrous
9 situation that we have at the 903 Pad and the other
10 facilities that we're talking about this evening.
11 Immediate, maybe not tomorrow, but you can bet for the next
12 100,000 years we're going to be having problems with the
13 plutonium that is a result of contamination from the plant.

14 I think this represents a profound lack of respect
15 for plutonium and other radionuclides that brought about the
16 903 disaster in the first place. And, the fact that the DOE
17 and the Colorado Health Department have so-called
18 permissible levels of plutonium emissions when the plant is
19 in regular production is an immediate problem. We do not
20 have the respect that is needed for this deadly mutagenic
21 stuff which in the case of plutonium, need I remind you,
22 will be around for 240,000 years.

23 Furthermore, I think it's also dangerous to talk
24 about immediate threats constantly involving human beings
25 when this contamination has already occurred in relation to

1 carbon columns. This water needs to be monitored on a
2 continuous basis and it needs to be done in real time. And,
3 if indeed, you know, the carbon system is going to be in
4 place prior to the radiation treatment, it is unconscionable
5 for there to be any consideration of releasing that water
6 into the public domain. That can't happen.

7 Another area of concern is disposal of the spent
8 filters from the solids dewatering equipment. It is
9 proposed to ship these to Nevada for burial; however, Nevada
10 is not accepting waste from your facility. An ultimate
11 disposal plan needs to be augmented and very firmly in place
12 before commencing any operations. Storage on site is
13 unacceptable.

14 Also unacceptable is the proposal to use Indiana
15 Street as a route for the tanker trucks bearing contaminated
16 water. Indiana Street is a heavily traveled road through a
17 populated area. The burden of transport is on the plant and
18 you need to figure out a transport plan that will in no way
19 put the public at any risk. We have been the unwitting
20 recipients of contamination through sloppy and uncaring
21 methodology since the plant's inception.

22 I see that you have an opportunity here to at
23 least partially remediate 40 years of irresponsible and
24 ineffectual handling of radio-toxic substances and also to
25 partially remediate the cavalier disregard for the public

1 that remains unchanged to this day and I would strongly urge
2 you to do so.

3 Thank you.

4 MS. GREEN: Thank you. Barb Moore?

5 Okay. We have accepted Penelope Pegis' testimony
6 as Exhibit 4 and Barb Moore's as Exhibit 5.

7 (Whereupon, Exhibits No. 4 and 5 were received into the
8 record.)

9 MS. BARB MOORE: Good evening. My name is Barb Moore.
10 I am a director of the Front Range Alternative Action Group.
11 I am also a director on the Rocky Flats Cleanup Commission.
12 Tonight, I will speak as a public citizen.

13 The first two items I wish to address relate to he
14 execution of this hearing. First, it continues to be a
15 problem that DOE and EG&G continue to schedule these
16 hearings without giving interested citizens sufficient time
17 to review the documents in question. This problem is not
18 new. We have been through this with the IAG, 881, and now
19 903. There have been promises made by DOE and EG&G to
20 correct this problem, but we have heard this before. It's
21 time for DOE and EG&G to act. It is mandatory that these
22 documents be distributed and mailed as soon as possible to
23 the concerned citizens.

24 Number two, I would like to know why there wasn't
25 a work study or a work session for this document? The 903

1 area is one of the most critical areas targeted for cleanup.
2 EG&G and DOE offered a work study for the 881 decision
3 document. A study session of sorts was provided for the
4 PRMP. But, it was overlooked for 903. Could it be that
5 EG&G and DOE are not prepared to answer the questions that
6 would be asked? Could it be that they don't entirely
7 understand the steps, but only have an educated guess on how
8 to propose system will work? In the future, please provide
9 a workshop when we are dealing with documents that involve
10 this type of complexity.

11 Now, about the document. Section 333 states you
12 will consider attainment of the Clear Water Act, CWA, water
13 quality criteria where relevant and appropriate. on the
14 next page it states it may not be practicable to attain all
15 ARAR's for the interim action and ARAR waivers or alternate
16 concentration limits may be requested after the study is
17 complete. The big questions here are who decides what is
18 relevant and appropriate? Who will issue waivers of the
19 ARAR's? Who decides that the study is complete? Who will
20 get notified if any of these actions should take place. If
21 the DOE is so confident that their water treatment systems
22 described in this IM/IRA will work, then why do they need to
23 build into it these escapes.

24 If the proposed technology described in this plan
25 cannot meet all the standards, whether they be CWA, ARAR's,

1 state or any other applicable regulation, then DOE needs to
2 go back to the drawing plan that they can guarantee will
3 work. It simply is not good management to spend money on
4 something that won't meet the requirements. Don't build
5 into these documents ambiguous statements about "where
6 relevant and appropriate are waivers of the ARAR's". It
7 only acts to further reduce your credibility.

8 Section 4-3 describes that the transport of the
9 water from the collection systems to the treatment plant
10 will be done with a tank truck. DOE and EG&G propose to
11 truck this poison from the collection point south to the
12 treatment plant. The concern here is the redistribution of
13 soil particulates in the air that are contaminated with the
14 plutonium and uranium. Past remediation on this site has
15 caused high levels of plutonium to be found throughout the
16 entire Denver metro area.

17 I reference a Dow Chemical report, July 9, 1971,
18 that tells us the quantity of plutonium redistributed was
19 directly associated with removal of the drums, physical
20 activity, and periodic high winds. If you go back and
21 review the data from 1969, you will find the highest
22 readings in 1969 for plutonium in the air occurred during
23 the times of heavy cleanup activity. It would be foolish to
24 repeat these mistakes.

25 The plan to transport this collected water with a

1 tanker truck over a public highway to get from one part of
2 the plant to another is absolutely unacceptable. Indiana is
3 a fast highway. In the winter when the winds start blowing,
4 that highway will redefine for you what hazardous driving
5 conditions are all about. There is a significant chance for
6 accident. Why risk this? To save a few dollars? It's not
7 worth it. The transport system for this water needs to
8 remain on-plant and needs to be redesigned.

9 Page 7-2, Paragraph 2, is the only mention of a
10 health and safety plan. Given the experiences of 881, I
11 would think a health and safety plan would warrant its own
12 section in this document and not hidden in a paragraph that
13 begins with dust control. It is neglectful that this is
14 hidden in that paragraph. The IAG has a mention in it that
15 all the contractors and subcontractors be educated on what
16 the IAG is and what their requirements are under the IAG.
17 And, I would like to know if this has been done. It
18 certainly isn't mentioned in this decision document.

19 Page 4-19 says the effectiveness of this surface
20 water collection by diversion along with implementation of
21 dust suppression procedures during installation should
22 result in a high degree of public acceptance. What audacity
23 to assure that the public will endorse this technology. I
24 don't know anyone in the public that is satisfied with the
25 dust suppression methods that have taken place at 881. The

1 903 area has even higher levels of radiation. Why would you
2 assume that we would give you our stamp of approval on this
3 so-called plan? Perhaps if you tell us enough that we do
4 approve something, maybe we'll do it. I don't know. But,
5 you need to think this over. The cleanup and construction
6 activity must be done under a protective dome of some sort.
7 This would prevent the plutonium contaminated soil from
8 being resuspended into the air.

9 Page 7-3, in regard to the carbon columns, I would
10 also like to ask will the carbon columns be tested for
11 radioactivity and will the water be tested prior to entering
12 that column? It would seem prudent to construct a small
13 setup in a laboratory to test the proposed technology prior
14 to spending hundreds of thousands of dollars before we
15 implement it.

16 The last thing I have to comment on at this time
17 is that DOE should instruct EG&G to design a water treatment
18 plant that would be able to treat all the water destined for
19 treatment in the IM/IRA's that we're going to be looking at
20 with this IAG. It seems like a tremendous waste of money to
21 be building separate treatment plants for 881 and 903 and
22 who knows what other treatment plants we're going to have to
23 build in the future. I would like to see a system designed
24 that could handle all of the problems out there.

25 Thank you.

1 MS. GREEN: Barb, you didn't give your address. Could
2 you do that real quickly? Sorry.

3 MS. MOORE: [REDACTED] [REDACTED] [REDACTED],
4 [REDACTED] [REDACTED]

5 MS. GREEN: Thanks.

6 Joe Tempel?

7 MR. TEMPEL: I'm Joe Tempel, president of the Rocky
8 Flats Cleanup Commission. M [REDACTED] [REDACTED] [REDACTED]
9 [REDACTED] [REDACTED].

10 I just wanted to, first of all, thank you for this
11 format. It was at least better than nothing in terms of the
12 information provided at the beginning to give us an
13 opportunity to ask questions. But, I would support even a
14 longer time to ask questions or a separate meeting to be
15 able to address questions so that our comments later on
16 would be more meaningful. But, I appreciate the time that
17 you gave us at the beginning of the meeting.

18 I would like to follow up on a question that I had
19 on the ARAR's. That even though the plant is not required
20 to meet the ARAR's, I would like to feel that the
21 requirement would be placed on them because of the time
22 frame between now and when the final action would be in
23 place. And, as far as I could tell from the graphic, it's
24 going to be another six years before the final action is in
25 place and then the AR's would have to be met. So, I would

1 like to think that everything possible would be done to meet
2 the AR's now for the next six years.

3 There was a statement made on Page 6-8 that
4 surprised me a little bit as careful as you were throughout
5 the process in describing the filtration system and the GAC
6 system. That when you get the filter cake collected in the
7 bottom of the filter that you're going to flip it in a
8 dumpster. That seemed a little bit crude to me and I'm sure
9 it's a little more sophisticated than that, but I would be
10 interested in what this dumpster looks like and how the
11 worker is protected and that it's more of a sealed system
12 than a dumpster that we find out in our alleys. I'm sure
13 that's not what you mean, but it seemed a little crude when
14 I read it

15 I would also like to follow up on the previous
16 speaker's request for a community relations plan and a
17 health and safety plan. These both should be in place and
18 have been reviewed by the public before construction begins.
19 We went around on this on the 881 and we still aren't
20 comfortable with the health and safety plan for 881. And,
21 we figure that was just practice compared to the 903 Pad
22 Area where there's a much more serious risk involved with
23 disturbing the dust because it does have much more plutonium
24 than 881 And, those dust controls on either 881 or 903
25 have not really been addressed to our satisfaction. We're

1 still awaiting the -- I don't know the exact title of the
2 report, but it was one that we've been promised previously
3 on the dust control study that will address all technologies
4 to control dust, not only just wetting it but also covering
5 the entire site with a portable shelter and protecting the
6 worker while he or she is inside that shelter. We feel this
7 study should be complete and submitted to the public for
8 review before actions begin at 903 Pad and Trench and
9 Hillside.

10 We'd like to congratulate you -- I'm speaking for
11 Joe Colefield this evening who likes to speak on synergism
12 and additive effects, but at least as far as I can tell on
13 Page 7-10, you did make the reference that the contaminants
14 are additives and this is something we've been arguing all
15 along. It is consistent with the EPA guidelines for
16 estimating health risk and we are glad you finally
17 recognized that and are following the procedures. What is
18 missing though is the calculations that went along with that
19 to show us how you did add up those individual risks to come
20 up with your final risk assessment which is pretty sketchy
21 in Chapter 7. I would like to have an opportunity to review
22 that risk assessment to see how, in fact, you did add each
23 of those individual risks and summed them for the total
24 carcinogenic risk.

25 I would also like to encourage some kind of a

1 holding tank between the two systems for treating
2 radionuclides and the VOC's. I'd hate to contaminate a
3 whole barrel or a bin of carbon that would just have to be
4 treated as another waste if some of the radioactive
5 pollutants did get into the carbon system. It appears to me
6 that it isn't sufficient just to take individual samples
7 just to see if it's working because if you do get a bad
8 sample, then you've polluted that carbon system. It seems
9 like there should be an interim tank to test periodically
10 before you send it on through the carbon system. Even
11 though this amount may be a minor amount, the general public
12 would feel much better if you recycled it back through the
13 plant. You're putting in pipes and it seems like there
14 should be a way to connect it to some kind of system out
15 there that could be recycled back into the plant to support
16 the concept of a zero discharge from the plant.

17 Even though you folks are dealing with the
18 restoration end of it, there's others that deal with the
19 NPDES part of it for operations and the goal is zero
20 discharge. And, if you can deal with that on individual OU
21 basis, we would appreciate it. And, I think the health
22 department would, too, since they issue that NPDES permit.
23 Part of that permit is normally a requirement for that
24 biomonitoring is my understanding and, as far as I know,
25 you're doing it now for that permit. So, I think the

1 previous comment to at least prove that the water is good
2 enough for minnows, maybe we'll feel a little bit better
3 about it that it's fit for humans.

4 That's the end of my comments.

5 MS. GREEN: Thank you.

6 James Kelly?

7 (No response.)

8 MS. GREEN: Is Mr. Kelly gone? Okay.

9 Kim Grice?

10 MR. KIM GRICE: Good evening. My name is Kim Grice.

11 M [REDACTED]
12 [REDACTED]. I'm chairman of
13 Committee Against Radiotoxic Pollution, director with the
14 Rocky Flats Cleanup Commission, and a member of Colorado
15 Association of Realtors

16 To begin, IM/IRA for the OU2 to remediate
17 contaminated surface waters must not proceed as did OU1, the
18 881 Hillside We're appalled that there is still no
19 community relations plan implemented to inform the public.
20 DOE and EG&G are not involving affected citizens in the
21 continued cleanup process at 881 and we fear the same will
22 occur at 903. It is stated that the public under Superfund
23 laws shall be involved in the oversight of cleanup.

24 One method toward establishing accountability
25 would be to publish and distribute a bi-monthly remediation

1 progress report for each site. The report should include,
2 but not be limited to, the following data and information:
3 (a) A brief description of summary of work performed and by
4 whom; (b) Dates the site was inspected by Colorado Depart-
5 ment of Health and EPA and by whom; (c) Equipment log (type
6 used, hours used, rad inspections, detox owner); (d) worker
7 log (number used, hours at site, individual radiation badge
8 counts, daily radiation count on worker clothing at end of
9 each shift); (e) site specific wind rose data (for example,
10 direction, speed, frequency, shutdowns); (f) site-specific
11 soil sampling (when, how, where with in-site percent of
12 respirable dust, characterization, et cetera); (g) site-
13 specific air monitoring (wind, type of, locations, data, et
14 cetera;); (h) weekly inspection reports on work of compliance
15 to OSHA regulations; (i) removal of soil (for example,
16 characterization, cubic yards, deposited where, when, how);
17 (j) water seepage (characterization, amount, pump, when, and
18 where to); (k) minimum of two pictures of current construc-
19 tion and the layout, a site layout.

20 We find it distressful that some citizens are
21 denied copies of OU2, the IM/IRA texts number I and II,
22 because it costs \$40.00 Not speaking for the Rocky Flats
23 Cleanup Commission, but as a participating director and
24 citizen, you know, we've been denied numerous times when we
25 requested multiple copies of documents for each of the 15

1 board members. The point I want to make is it should be to
2 DOE's advantage to supply any concerned citizen, bureaucrat,
3 or scientist with a copy of a report which shall be open for
4 public comment. But, we were informed that there was a
5 potential demand for these documents that was between 25 and
6 90 sets. So, at \$40.00 each, this would be approximately
7 \$3,600. I would say the return on this minor investment
8 would be 100-fold by way of technological insights into
9 better processes, the discovery of potential inadequacies,
10 and improving good will. As some would say, the mind is a
11 terrible thing to waste.

12 All right. Now, I would like to proceed with my
13 comments in a somewhat sequential order starting with the
14 table of contents found in Volume I Number one, numerous
15 types of measurements were used within this report. It
16 would seem appropriate to include conversion charts. Two,
17 the report did not identify PRP's, primary responsible
18 parties.

19 Three, the surface water contamination addressed
20 in OU2 demands treatability by constructing a treatment
21 facility. Since there are other surface waters that need
22 remediation found in other OU's, like from the A, B, and C
23 Series ponds and the drainages of Woman and Walnut Creeks,
24 why not build a facility with a capacity and technology to
25 remediate all Rocky Flats surface water runoff and

1 groundwater? After treatment, why not recycle and reuse the
2 effluents so, in effect, DOE would be accomplishing zero
3 discharge to the public domain? And, by the way, how do we
4 know that the surface water seeps aren't actually ground-
5 water which has surfaced?

6 Four, the maps used in Section 2 called Figure 2-
7 1 and Figure 2-3 lack sufficient detail and updating.
8 Demographical data is scarce or covers too broad an area
9 away from the primary affected area of concern which should
10 be within six miles. A population distribution quadrant map
11 around Rocky Flats should be included. This diagram would
12 chart the population in various sectors and subsectors out
13 to six miles. CDH does sectoring with their soil survey
14 analysis and the two data bases could be helpful in future
15 studies in dose risk analysis.

16 Five, there was no mention of meteorological or
17 ambient air monitoring. The remediation of surface waters
18 involves construction of some pipelines and the use of
19 trucks to transport effluents from pumping sites over gravel
20 roads, thus causing resuspension of contaminated respirable
21 dusts in the size of less than 5 micrometers. Why weren't
22 wind rose data and other meteorological information
23 included?

24 Six, the carbon tetrachloride isoplethic map did
25 not account for the 1600 micrograms per liter found in Well

1 1-71 nor did it account for 1,560 micrograms per liter in
2 Well 42-86. The tetrachloroethane isoplethic map did not
3 account for 120,000 micrograms per liter found in Well 1-74
4 nor 450 micrograms per liter in Well 3-74 nor 320 micrograms
5 per liter in Well 42-86. The trichloroethane isoplethic map
6 did not account for 14,000 micrograms per liter found in
7 Well 2-71 nor the 4500 micrograms per liter in Well 2-71 nor
8 7,000 micrograms per liter in Well 1-74 These concentra-
9 tions were detected in 1986. Where has these constituents
10 been transported to if they are not now detected in said
11 concentrations?

12 Seven, isopleths showing other chemical and
13 radionuclide concentrations in surface and groundwater were
14 not included. Why?

15 Eight, surface water radionuclide standards used
16 are not based on natural background levels for the region or
17 the United States. Why? For example, the natural
18 background levels for plutonium in surface water is .001
19 picocuries per liter. Why shouldn't ALARA, as low as
20 reasonably achievable, be a designated goal along with ARAR
21 requirements, whichever is more stringent? What are the
22 U.S. natural background levels for these chemicals, metals,
23 and radionuclides in surface water?

24 Number nine, it is my understanding that this
25 IM/IRA by law must aim to be consistent with a final remedy.

1 This report ignores a potential health concern. Why delay?
2 Why not begin reviewing the synergistic effects of the
3 chemicals and radionuclides? Rods on other Superfund sites
4 may have already addressed synergistic effects as DOE
5 attempted to review these other rods for this data.

6 Ten, many documents cited within this report were
7 not included in the reference section nor was the public
8 given an opportunity to review them.

9 Eleven, there is some doubt if radionuclide
10 concentrations in this report reflect accurately the 1986
11 concentrations found in wells located within OU2.

12 Number twelve, the reverse osmosis treatability
13 process was not studied. Why not?

14 Thirteen, future water studies should try and
15 develop three dimensional plumage, promote cluster wells at
16 various depths.

17 Fourteen, solubility of plutonium and other
18 radionuclides have not been fully addressed in the
19 monitoring and treatability processes.

20 Fifteen, it would be naive of us if we did not ask
21 the question how can we be assured that the surface water
22 results in this report and future ones meet quality control
23 criteria for analytical procedures. Our concern is derived
24 from an August 1987 report called final memorandum to EPA by
25 PRC Environmental Management, Inc. They stated that there's

1 been a problem with lab results for Rocky Flats. For
2 example, and I quote, "the analytical laboratory exceeded
3 the volatile holding time. Volatile results should be
4 considered unreliable." Also, another quote, "the
5 chlorherbicide results should be considered unreliable due
6 to blank contamination."

7 And, in closing, I want you to remember that clean
8 air and clean water was here before Rocky Flats. I
9 personally believe that this dirty facility ought to clean
10 up their polluted sites to meet natural background levels
11 found elsewhere in the United States. Rocky Flats should
12 also attempt to recycle and reuse all effluents. The public
13 wants a zero discharge even if it is treated waste. And,
14 finally, Rocky Flats should definitely eat its own waste.

15 Thank you.

16 (Applause.)

17 MS. GREEN: Thank you.

18 Abraham Black?

19 MR. BLACK: My name is Abraham Black. I don't
20 represent any group of people that the previous speakers
21 have been. I am a previous employee at Rocky Flats. I was
22 employed by the contractor, Dow Chemical Company, when it
23 was contracting for a Government agency, the Atomic Energy
24 Commission. I'm greatly concerned and not exactly well-
25 pleased with some of the work that I was ordered and

1 detailed to do that brought me in contact with some
2 hazardous material that I didn't know anything about and
3 neither was I hired or paid to know anything about this.
4 And, I brought this to the attention of what I believed to
5 be the Department of Energy. It's an arm of the Federal
6 Government. I've never received any kind of an answer for
7 it.

8 I spoke previously and I understood one man to say
9 something to mention I should take it up with Dow Chemical
10 Company. But, when I talked to this man during break time,
11 he didn't know -- he said he didn't know anything. He
12 couldn't confirm anything that I should ought to do. But,
13 he did mention see the elected officers. I think David
14 Skaggs was mentioned. All claims that I've ever heard ever
15 being settled from any results of Rocky Flats by any
16 contractor was settled through a Court of law. And, I think
17 the Federal Government should be on the side of the people
18 and not the defendant, the contractor, and when some
19 reasonable evidence is presented that a contractor has
20 endangered the life or health of any employee or any other
21 people, a deep study should be made in great consideration
22 as to whether this contractor will continue to contract for
23 the Federal Government.

24 I've never heard of any Federal employee or a
25 management or a person of supervision to ever be affected by

1 any of the ill-effects of what they come in contact with at
2 Rocky Flats, regardless of the contractor. The question
3 there could be as these supervisors and these well-trained
4 and educated people have more knowledge than we do and that
5 they stay clear of all this hazard. When just a common
6 craftsman that's working as a craft or trade, he's going to
7 do his work as he's told to do. But, a supervisor and a
8 Government person, they kind of, more or less, pick and
9 choose what they come in contact with.

10 This could go on all night long, some kind of a
11 resolution, what we're going to do about this. Hold up all
12 production, not the cleanup, not some precaution or
13 preventative or something like that. We're talking about
14 production where they open up new containers and new barrels
15 of that stuff that I helped bury. And, hold that up until
16 all questions and claims have been given -- been addressed
17 proper. Or have some kind of a settlement made.

18 And, the second one, to see our elected officers
19 and express ourself, how we feel about what our own federal
20 Government that we have supported so well is doing to us. I
21 believe that concludes. We could go on with this all night
22 long, but this is all I feel like doing tonight.

23 MS. GREEN: Mr. Black, I don't believe you gave your
24 address. Would you mind doing that for us real quick?

25 MR. BLACK: I spend more time out of this state than I

1 do in this state, b [REDACTED] [REDACTED] [REDACTED],
2 [REDACTED] but I'm leaving this state just as quick as I can get
3 my business together.

4 MS. GREEN: Okay.

5 MR. BLACK: Thank you.

6 MS. GREEN: Thank you.

7 Barb Moore, you're listed again. Was that a --
8 okay. Okay.

9 Marcia Bryant? Exhibit 6, okay. Accepting
10 Exhibit 6, written testimony from Marcia Bryant.

11 (Whereupon, Exhibit No. 6 was received into the
12 record.)

13 MS. MARCIA BRYANT: Okay. Good evening. My name is
14 Marcia Bryant and I'm an Arvada resident. [REDACTED] [REDACTED]

15 [REDACTED] [REDACTED] And, I'm also a native
16 Coloradan and I was born just about the year Rocky Flats was
17 built. So, I'm about as old as Rocky Flats is.

18 Anyway, back to the comments. I'm really upset
19 about the lack of availability of the documents to the
20 public. I have not yet had a chance to obtain a document to
21 look at because my working hours really constrain me from
22 going to one of the four places where this is available.
23 So, I feel like there should be more community relations
24 between the plant and the public in order to get copies
25 besides these four places that close at 5:00 o'clock. When

1 people work past 5:00, it's a little hard to get there, and
2 if they're not open on weekends, then you're sort of out of
3 luck. So, I reiterate what Kim Grice and some other people
4 have said about this.

5 And, I'm basically speaking as a concerned
6 citizen. I would just like to get more availability of all
7 the documents, the safety concern documents, the health
8 problem documents, whatever is available, and Dr. Gale Biggs
9 mentioned some documents that aren't even complete yet and
10 yet they're talking about going ahead with this plan without
11 the documents being complete and available to the public.
12 And, I feel as a public citizen, we are entitled to see
13 these documents. Even if they're in draft form, we still
14 should be able to see them

15 I feel since I am a native Coloradan, the only --
16 I've spent one year out of the state since I've been alive.
17 So, I feel like I've had a lot of constant exposure to
18 plutonium, among other chemicals, that are in the ground and
19 the water. And, when I moved to Arvada about 15 years ago,
20 I said jokingly there's plutonium in the water out here, I
21 hope you people know this. Well, that's -- you know,
22 several of you joke because it really is true. So, I think
23 it -- unlike the slides Tom Greengard showed, I believe
24 earlier, that it's not an immediate threat to the community
25 and the workers, I feel this is an untruth and a lie.

1 So, I feel that really the only way to clean up
2 Rocky Flats -- and I have been working with the Rocky Flats
3 Cleanup Commission -- is to shut the place down and I hope
4 this is done soon and before my children grow up.

5 Thank you.

6 (Applause.)

7 MS. GREEN: James Kelly, has he returned?

8 (No response.)

9 MS. GREEN: Okay. And, is there any more lists?

10 (No response.)

11 MS. GREEN: Okay. I'd like to open it up then if
12 anybody who has already made comments would like to come up
13 again. Okay?

14 DR. EUGENE DEMAYO I haven't made any comments yet,
15 but I'd like to. My name is Dr. Eugene DeMayo. I represent
16 the Sierra Club of Colorado as the chairman of that group.

17 I, too, was not able to review the document due to
18 its unavailability, but tonight I've reviewed a number of
19 summaries and things here and have a few comments to make
20 based on that

21 Number one is document availability. There really
22 is no excuse for not making these available to any citizen
23 who feels like they want to review it and comment on it and
24 that has been a problem continuously with these. They may
25 be expensive, but compared to the operation going on,

1 they're cheap. So, if they're copied on two sides of the
2 paper and you increase the number of copies you make, you
3 will find that the price goes down quite considerably.

4 The fugitive dust problem was something that was
5 commented on on the 881 Hillside, it's come up here again,
6 and yet there's still no real solution for either site as to
7 how it's going to be monitored in real time or whether or
8 not the use of an enclosure will be taken up which is
9 probably something DOE should be investigating very
10 carefully as whether or not that type of protection on the
11 site would be reasonable to do, enclosing it in a portable
12 building to reduce the amount of fugitive dust and also
13 allow the workers that work in that area to wear better
14 protection gear and protect the workers while they work in
15 there, as well as the citizens off-site when the dust blows
16 around.

17 It again came up tonight about contractor
18 education about the rules of the IAG. This has been
19 something that came up with the IAG and the Hillside 881
20 comments and again here. There's no indication that I noted
21 when I talked to people who have actually read the document
22 that the contractors will be educated as to what the rules
23 and regulations that they must follow are. There are quite
24 a few unanswered questions when it came to the 881 Hillside
25 and the contractors being used and what they knew about how

1 to protect themselves and their workers and not to track the
2 stuff off-site.

3 Community relations plan and health and safety
4 plan, come on, this is obvious. These things should be in
5 place if we're going to go ahead with these types of
6 operations. Getting those documents or those plans together
7 is really imperative to the ongoing cleanup at Rocky Flats.

8 Finally, the referencing of non-existent or non-
9 final form documents is not acceptable. We need to be able
10 to follow references in this document back to the planning
11 documents that are supposedly referred to even if these
12 documents are in draft form and, here again, another ongoing
13 problem is being able to see documents in their draft form.
14 I'll tell you if it says draft on the front of it, I know
15 what that means. It means it's not completed, that not
16 everything in there is finalized, but at least it gives you
17 an idea of what's going on. As we found with the Department
18 of Energy, it can take years, sometimes many years, to get
19 some documents from their draft form to their final form and
20 it seems like some of them never, ever get finalized. The
21 point is, is if we don't have them in draft form, then they
22 should not be referenced. If we don't have them available
23 in draft form, they should not be referenced. The plan
24 itself, this document on the 903 Pad Area, should actually
25 include the information they want referenced right in it if

1 that is the case.

2 Thank you.

3 MS. GREEN: Before you go, could you give us your
4 address? Sorry.

5 DR. DEMAYO: Sure. [REDACTED] [REDACTED] [REDACTED]
6 [REDACTED] [REDACTED]

7 MS. GREEN: Thank you.

8 Is there anyone else that would like to make any
9 comments this evening?

10 (No response.)

11 MS. GREEN: I would urge you to submit written comments
12 by November 24 to the address that's available at the back
13 table. And, thank you very much for your participation this
14 evening.

15 (Whereupon, Exhibits No. 7 and 8 were received into the
16 record by stipulation.)

17 (Whereupon, the meeting was adjourned.)
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